

DETAILED ACTION

1. Applicant's amendments filed 11/1/11 overcome the rejections set forth over Meyer and Harrison in the office action mailed 8/4/11, but the rejection set forth over Tiffany and Meyer is maintained below. Newly added claims 16-22 are also rejected below.

Claim Rejections - 35 USC § 103

2. Claims 1-3, 6, 11-12, and 15-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tiffany in view of Meyer.

Tiffany discloses a lubricating composition comprising a succinimide dispersant substituted by a C₂₀-C₆₀ olefin (column 5 lines 45-67), overlapping the range recited for the R¹ group of claims 1 and 16-19, and a second succinimide dispersant substituted by a C₆₀-C₃₅₀ hydrocarbyl group (column 8 lines 49-65), overlapping the range recited for component (B) of claims 1 and 12. In the table in column 12, Tiffany discloses that the two succinimides are added to the composition in similar amounts, and the relative concentrations therefore meet the limitations of amended claim 1. In column 10 line 62-63 Tiffany discloses that the compositions can be automatic transmission fluids as recited in amended claim 1. In the table in column 12 Tiffany discloses that the compositions can comprise antiwear agents, as recited in claim 15. Tiffany does not specifically disclose a succinimide formed from a polyalkylenepolyamine having a ring structure.

In column 1 lines 56-63, Meyer discloses a detergent that is a mixture of N-substituted imides derived from adducts of maleic anhydride and olefins, which are then further reacted with amines. In columns 2-3 Meyer discloses that the maleic anhydride adducts have alkenyl groups of between 10 and 30 carbon atoms, encompassing the ranges recited for reactant (a) of claim 1, 6, and 16-19. In column 3 lines 30-34 Meyer discloses that 32 to 60% of the total olefin content is branched, implying that the remainder are linear, as recited in claims 1, 6, and 16-19. In column 4 lines 8-47, Meyer discloses that the amine mixture contains aminoethylpiperazine, meeting the limitations of the ring-terminated amine of reactant (b) of claim 1 as well as claim 3. Examples 1-7 in columns 6-8 discloses the preparation of additives meeting the limitations of claims 1 and 3.

Attention is drawn to the sample amine mixtures in Table IX (column 6 lines 34-47), which contain aminoethylpiperazine. While Meyer discloses the concentration in terms of weight percentage instead of mole percentage, it is clear that the amine mixtures in Table IX will meet the concentration limitation of reactant (b) of claims 1 and 20-22, as the "higher oligomers" that make up a large portion of the amine mixtures will have a higher molecular weight than the aminoethylpiperazine, and the mole percentage of aminoethylpiperazine in the mixtures will be greater than the weight percentage. The mole percentage of aminoethylpiperazine in the "Amine-A" mixture of Meyer will therefore overlap the range recited in claims 1 and 20-22. See MPEP 2144.05(I): "In the case where the claimed ranges "overlap or lie inside ranges

disclosed by the prior art" a *prima facie* case of obviousness exists. *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976);"

The use of the succinimide dispersant of Meyer as the low molecular weight dispersant in the composition of Tiffany meets the limitations of claims 1-3, 6, 12, and 15-22. Additionally, while Tiffany does not specifically disclose a continuously variable transmission fluid, it is the examiner's position that as the composition meets the compositional limitations of the claims and is useful as an automatic transmission fluid, it will also be useful in a continuously variable transmission as recited in claim 11.

It would have been obvious to one of ordinary skill in the art to include the dispersant of Meyer as the low molecular weight dispersant in the composition of Tiffany, as Tiffany teaches that the composition can be added directly to the fuel and Meyer teaches that the dispersant is also an effective detergent in fuels.

Response to Arguments

3. Applicant's arguments filed 11/1/11 regarding Tiffany and Meyer have been fully considered but they are not persuasive.

Applicant argues that the amendment to claim 1 requiring that the R¹ group be a linear alkenyl group having 16 to 30 carbon atoms overcomes the rejection over Tiffany and Meyer, but as stated in the rejection set forth above both Tiffany and Meyer disclose low molecular weight succinimides having a substituent with a number of carbon atoms overlapping the ranges recited in amended claim 1 as well as claims 16-19.

Applicant argues that one of ordinary skill in the art would not have been motivated to modify the combination of succinimide compounds of Tiffany with the "fundamentally different" succinimide compound of Meyer. The examiner disagrees that the succinimide compound of Meyer is "fundamentally different" from the low molecular weight succinimide compound of Tiffany. The number of carbon atoms in the hydrocarbyl substituent of Meyer overlaps the range of carbon atoms in the hydrocarbyl substituent in the low molecular weight succinimide of Tiffany, and the amines present in the amine reactant mixture of Meyer all fall within the scope of the amines reactants taught by Tiffany. Attention is drawn to column 3 lines 51-57 of Tiffany, which discloses that the amines can be heterocyclic amines, cyclic polyamines, and hydroxyl-substituted derivatives of polyamines, and column 6 lines 1-4 of Tiffany, which discloses that the amine reactants have a structural configuration present in the amines of Meyer. It is also noted that a motivation for the combination of Tiffany and Meyer has been supplied in the rejection set forth in the previous office action. Applicant has not addressed this motivation.

Applicant argues that the high molecular weight succinimide of Tiffany is outside the scope of the succinimide (A) of claim 1. While the examiner agrees, it is not clear how this is relevant to the rejection, since the high molecular weight succinimide of Tiffany is used to meet the limitations of the succinimide (B) of claims 1 and 12. Applicant has not stated how the high molecular weight succinimide of Tiffany does not meet the limitations of succinimide (B).

Applicant argues that the claimed lubricants for automatic transmissions are "fundamentally different" from the composition of Tiffany and Meyer, but Tiffany explicitly discloses that the compositions are useful as automatic transmission fluids. Even if the composition of Tiffany and Meyer were considered to be a two-cycle engine oil, the intended use limitation regarding automatic transmissions would not patentably distinguish the claims over the prior art. Case law holds that a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). In this case, the composition of Tiffany and Meyer meets the compositional limitations of the claims, and would be capable of lubricating an automatic transmission for some period of time.

Applicant asserts that a succinimide of structure (A) having greater than 30 carbon atoms in the hydrocarbyl group would not be sufficiently dissolved, leading to inferior anti-shudder properties. In addition to the fact that the succinimides of Meyer would contain a very minor amount of succinimide (A) having greater than 30 or more carbon atoms in the hydrocarbyl group, it is noted that applicant does not provide any evidence for this assertion and merely points to a section of the specification making the same assertion. This is clearly not sufficient to establish that one of ordinary skill in the art would not consider a composition containing a minor amount of succinimide (A)

having greater than 30 or more carbon atoms in the hydrocarbyl group to be useful in automatic transmissions.

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES GOLOBOY whose telephone number is (571)272-2476. The examiner can normally be reached on M-F 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Griffin can be reached on 571-272-1447. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/James Goloboy/
Primary Examiner, Art Unit 1771